

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claims 1-92 (canceled)

Claim 93 (currently amended): A method of identifying a compound or an agent that binds a levetiracetam binding site (LBS) of an SV2 protein comprising;

a) obtaining a cell-free or membrane-free SV2 protein comprising a LBS wherein the SV2 protein is SV2A or SV2C;

b) incubating the SV2 protein with a compound or an agent and levetiracetam (LEV) or an analog or derivative thereof that binds an LBS on a SV2 protein; and

c) determining if the compound or agent competes with LEV or an analog or derivative thereof for binding to the LEV binding site, thereby identifying a compound or an agent that binds the LBS of the SV2 protein ~~incubating the SV2 protein with LEV or an analog or derivative thereof that binds an LBS on an SV2 protein as a control; and~~

~~———d) determining whether the compound or agent binds the SV2 protein by comparing the binding of the compound or agent to the SV2 protein with the binding of LEV to the SV2 protein in the control.~~

Claim 94 (previously presented): The method of claim 93, wherein the compound or agent is an analog or derivative of levetiracetam.

Claim 95 (previously presented): The method of claim 94, wherein the analog or derivative of levetiracetam is selected from the group consisting of N-alkylated 2-oxo-pyrrolidine derivatives, N-alkylated 2-oxo-piperidinyll derivatives, and N-alkylated 2-oxo-azepanyl derivatives.

Claim 96 (canceled)

Claim 97 (previously presented): The method of claim 93, wherein the compound or agent is an anti-SV2 antibody or fragment thereof.

Claim 98 (previously presented): The method of claim 97, wherein the anti-SV2 antibody or fragment thereof binds to the levetiracetam binding site of SV2 protein.

Claim 99 (previously presented): The method of claim 97, wherein the anti-SV2 antibody or fragment thereof is selected from the group consisting of a polyclonal antibody and a monoclonal antibody.

Claim 100 (previously presented): The method of claim 99, wherein the antibody fragment is selected from the group consisting of an Fab fragment, Fab' fragment, F(ab')₂ fragment and an scFv fragment.

Claim 101 (previously presented): The method of claim 99, wherein the monoclonal antibody is selected from the group consisting of a chimeric antibody, a humanized antibody, and a human antibody.

Claims 102-138 (canceled)

Claim 139 (currently amended): A method of identifying a compound or an agent that binds a levetiracetam binding site (LBS) of an SV2 protein, comprising:

a) obtaining a cell-free or membrane-free SV2 protein comprising a LBS wherein the SV2 protein is SV2A or SV2B;

b) incubating the SV2 protein with a compound or an agent and levetiracetam or an analog or derivative thereof that binds an LBS on a SV2 protein; and

c) determining if the binding of levetiracetam or an analog or derivative thereof to the protein is inhibited by the compound or agent, thereby identifying a compound or agent that binds the LBS of an SV2.

Claim 140 (previously presented): The method of claim 139, wherein the analog of levetiracetam is (2S)-2-[4-(3-azidophenyl)-2-oxopyrrolidin-1-yl]butanamide.

Claim 141 (previously presented): The method of claim 139, wherein the SV2 protein is purified.

Claims 142 and 143 (canceled)

Claim 144 (previously presented): The method of claim 139, wherein the SV2 protein is immobilized.

Claim 145 (previously presented): The method of claim 139, wherein the SV2 protein is expressed on a transformed host cell.

Claim 146 (previously presented): The method of claim 139, wherein the levetiracetam or an analog or derivative thereof is directly or indirectly labeled.

Claim 147 (previously presented): The method of claim 146, wherein the label is a radiolabel.

Claim 148 (previously presented): The method of claim 147, wherein the radiolabel is ³H.

Claim 149 (previously presented): The method of claim 146, wherein the label is a fluorescent label.

Claim 150 (previously presented): The method of claim 146, wherein the label is an enzyme.

Claim 151 (previously presented): The method of claim 139, wherein the SV2 protein is incubated with the levetiracetam or an analog or derivative prior to addition of the agent.

Claim 152 (previously presented): The method of claim 139, wherein the SV2 protein is incubated with levetiracetam or an analog or derivative after addition of the agent.

Claim 153 (previously presented): The method of claim 139, wherein the SV2 protein is incubated with levetiracetam or an analog or derivative concurrent with the agent.

Claim 154 (previously presented): The method of claim 139, wherein the SV2 protein is incubated with levetiracetam.

Claim 155 (canceled):

Claim 156 (currently amended): A method of identifying a compound or an agent that binds the levetiracetam binding site (LBS) of an SV2 protein, comprising:

- a) obtaining a cell-free or membrane-free SV2 protein comprising a ~~levetiracetam binding site (LBS)~~ LBS wherein the SV2 protein is SV2A or SV2B;
- b) incubating the SV2 protein with a compound or an agent and (2S)-2-[4-(3-azidophenyl)-2-oxopyrrolidin-1-yl]butanamide;
- c) separately incubating the SV2 protein ~~and agent~~ with (2S)-2-[4-(3-azidophenyl)-2-oxopyrrolidin-1-yl]butanamide; and
- d) comparing the binding of (2S)-2-[4-(3-azidophenyl)-2-oxopyrrolidin-1-yl]butanamide to SV2 in steps (b) and (c) to determine ~~determining~~ if the binding of (2S)-2-[4-(3-azidophenyl)-2-oxopyrrolidin-1-yl]butanamide to the protein is inhibited by the compound or agent, thereby identifying a compound or an agent that binds the LBS of the SV2 protein.

Claims 157-173 (canceled)

Claim 174 (previously presented): The method of claim 93, wherein the SV2 protein is a human SV2 protein.

Claim 175 (currently amended): The method of claim 174, wherein the SV2 protein is an SV2A protein comprising SEQ ID NO: 2, ~~an SV2B protein comprising SEQ ID NO: 4~~, or an SV2C protein comprising ~~comprises~~ SEQ ID NO: 6.

Claim 176 (previously presented): The method of claim 93, wherein the SV2 protein comprises conservative amino acid substitutions.

Claim 177 (previously presented): The method of claim 93, wherein the SV2 protein is a recombinantly expressed protein.

Claim 178 (previously presented): The method of claim 177, wherein the SV2 protein is recombinantly expressed from COS cells.

Claim 179 (previously presented): The method of claim 139, wherein the SV2 protein is a human SV2 protein.

Claim 180 (currently amended): The method of claim 179, wherein the SV2 protein is an SV2A protein comprising SEQ ID NO: 2, ~~an SV2B protein comprising SEQ ID NO: 4~~, or an SV2C protein comprising SEQ ID NO: 6.

Claim 181 (previously presented): The method of claim 139, wherein the SV2 protein comprises conservative amino acid substitutions.

Claim 182 (previously presented): The method of claim 139, wherein the SV2 protein is a recombinant protein.

Claim 183 (previously presented): The method of claim 182, wherein the SV2 protein is recombinantly expressed from COS cells.

Claim 184 (canceled): The method of claim 156, wherein the SV2 protein is an SV2A protein, an SV2B protein, or an SV2C protein.

Claim 185 (previously presented): The method of claim 156, wherein the SV2 protein is a human SV2 protein.

Claim 186 (currently amended): The method of claim 185, wherein the SV2 protein is an SV2A protein comprising SEQ ID NO: 2, ~~an SV2B protein comprising SEQ ID NO: 4~~, or an SV2C protein comprising SEQ ID NO: 6.

Claim 187 (previously presented): The method of claim 156, wherein the SV2 protein comprises conservative amino acid substitutions.

Claim 188 (previously presented): The method of claim 156, wherein the SV2 protein is a recombinant protein.

Claim 189 (previously presented): The method of claim 188, wherein the SV2 protein is recombinantly expressed from COS cells.